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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ILDEBRANDO, CHRISTINA A

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/786,791

Applicant(s)

KATRIB ET AL.

Examiner

Christina Ildebrando

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-52 is/are pending in the application.
- 4a) Of the above claim(s) 40-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102/103

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 27-29, 31-37, and 39 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Richmond et al.

Richmond et al. (EP 0 584 415) discloses a catalyst composition useful in the dehydration of phenol. The catalyst composition comprises a partially reduced tungsten (VI) oxide supported on a carrier such as titanium dioxide (page 2, lines 40-45).

Example 5 specifically teaches a reduced tungsten oxide on titania (page 5). Richmond et al. teaches that the catalyst is prepared by depositing tungsten onto the support, followed by calcination and reduction with hydrogen (page 3). It is taught that the reduction step results in tungsten (IV) oxide, i.e. WO₂ (page 3, lines 40-45). Finally, it is taught that the catalyst composition contains 5-20% by weight of the reduced tungsten oxide (page 3, lines 25-30).

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With regards to 36-37 and with reference to the specification page 6, it is considered that the catalyst taught by Richmond et al. having 5-20% by weight of WO_2 would inherently possess the claimed atomic layers. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

With regards to claims 31-32, the examiner notes the recitation "could be." Therefore, it is considered that these are optional limitations which are not required by the claimed invention.

The process limitations recited throughout the claims are noted for the record, i.e. the recitation "prepared by the reduction of the corresponding MO_3 oxide(s)" in claims 27 and the reduction process steps recited throughout.

The disclosed product of Richmond et al. and the instantly claimed product appear to be essentially the same, comprised of the same components, WO_2 supported on titanium dioxide. In the event any differences can be shown for the product of the product-by-process claims 27-29, 31-37, and 39 as opposed to the product taught by Richmond et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is

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shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

4. Claims 27-29, 31-37, and 39 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshioka et al.

Yoshioka et al. (US 4,140,654) discloses a catalyst composition useful in the reduction of nitrogen oxides. The catalyst composition comprises a non-noble transition metal supported on a carrier comprising titanium dioxide, a clay mineral, and an additional silica component (column 2, lines 50-65). Suitable transition metal components include WO_2 (column 4, lines 5-12). The transition metal compound is contained in an amount in the range of 3-15% by weight (column 4, lines 30-40).

With regards to 36-37 and with reference to the specification page 6, it is considered that the catalyst taught by Yoshioka et al. having 3-15% by weight of WO_2 would inherently possess the claimed atomic layers. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

With regards to claims 31-32, the examiner notes the recitation "could be." Therefore, it is considered that these are optional limitations which are not required by the claimed invention.

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The process limitations recited throughout the claims are noted for the record, i.e. the recitation "prepared by the reduction of the corresponding MO_3 oxide(s)" in claims 27 and the reduction process steps recited throughout.

The disclosed product of Yoshioka et al. and the instantly claimed product appear to be essentially the same, comprised of the same components, WO_2 supported on titanium dioxide. In the event any differences can be shown for the product of the product-by-process claims 27-29, 31-37, and 39 as opposed to the product taught by Yoshioka et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

5. Claims 27-28 and 30-38 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Miki et al.

Miki et al. (EP 0 639 553) discloses a catalyst composition which comprises iron oxide, nickel oxide, molybdenum oxide, and alkali metal or alkaline earth metal (page 3, lines 5-45). Molybdenum oxide may be contained as MoO_2 in amounts falling within the range of 0.1-10% by weight (page 3, lines 40-45). The composition may be supported on a carrier such as titanium dioxide (page 4, lines 10-15).

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With regards to 36-37 and with reference to the specification page 6, it is considered that the catalyst taught by Miki et al. having 0.1-10% by weight of MoO_2 would inherently possess the claimed atomic layers. When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

With regards to claims 31-32, the examiner notes the recitation "could be." Therefore, it is considered that these are optional limitations which are not required by the claimed invention.

The process limitations recited throughout the claims are noted for the record, i.e. the recitation "prepared by the reduction of the corresponding MO_3 oxide(s)" in claims 27 and the reduction process steps recited throughout.

The disclosed product of Miki et al. and the instantly claimed product appear to be essentially the same, comprised of the same components, MoO_2 supported on titanium dioxide. In the event any differences can be shown for the product of the product-by-process claims 27-28 and 30-38 as opposed to the product taught by Miki et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results. See *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). Also, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to

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applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Response to Arguments

6. Applicant's arguments filed 5/5/03 have been fully considered but they are not persuasive.

With regards to the Richmond et al. reference, applicant argues that the intended use of Richmond differs from the intended use of the catalyst instantly claimed. However, while intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. *In re Casey*, 370 USPQ 235 and *In re Otto*, 312 USPQ 458. Applicant has not provided any evidence that the intended use of the claimed catalyst results in a structural difference over the product of Richmond et al. Also, it is noted that applicant's assertions are not commensurate in scope with what has been claimed because no intended use is recited in the claim.

Applicant further argues that it is their belief that Richmond et al. does not obtain a bifunctional catalyst under the reduction conditions claimed instantly. However, as discussed in the previous office action, the disclosed product and the instantly claimed product appear to be the same, i.e. reduced tungsten oxide supported on titanium dioxide. Applicant has the burden of demonstrating that the claimed product differs structurally or in any way from the prior art by virtue of its process of making. Applicant

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has not met this burden. Applicant has not provided any evidence or comparative data which would demonstrate that the claimed product differs from the product taught by Richmond et al.

With regards to the Yoshioka et al. reference, applicant argues that the reference teaches that the species WO_2 is listed without any preference. However, the reference does teach that the species may be used, giving one of ordinary skill motivation to use it. Applicant further argues that it is their belief that Yoshioka et al. does not obtain a bifunctional catalyst. However, applicant has not provided any evidence to support this belief.

With regards to the Miki et al., applicant argues that 4 active species are used. However, there is nothing in the instant claims which preclude additional elements from being present, even in major amounts. Note the "comprising" language. Applicant argues that the support may be either silica or titanium dioxide. However, it is the position of the examiner that the reference clearly teaches that titanium dioxide may be used and therefore meets the claims.

Applicant's arguments with regards to the restriction requirement are noted by the examiner. However, the restriction requirement was made final in the previous office action (Paper No. 9). Refer to MPEP 813.01(c) and 821.01.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. This application contains claims 40-52 drawn to an invention nonelected with traverse in Paper No. 7. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

CAI
June 3, 2003



TOM DUNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700